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Positive schooling and resilience

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Schools play an increasingly important role in assisting youth to develop cognitive, social and emotional skills. Twenty first century schooling has been conceptualized in many different ways and has multiple components to it including an emphasis on the role of technology in changing education, new pedagogies, inter-displinary curriculum, open learning spaces and reformed teacher training. However, a core proponent of all conceptualizations of twenty first century schooling is the need for education to develop the whole-student through social, emotional, moral and intellectual development. In Positive schooling teachers use techniques that focus on the well-being of individual students. The goal of positive schooling is to turn all students into teachers who will pass down their wisdom and knowledge to others and teachers who will continue the ways of positive education. The major components of positive schooling are caring, trust, respect for diversity, goals, plans, motivation, hope and societal contributions. These are learnt by different life skills. Resilience is one of them. Resilience is the process of coping with disruptive, stressful or challenging life events. In other words, resilience is the capacity to bounce back, to withstand hardship and to repair yourself. This article is going to be explaining that how by this skill; children can gain the confidence to deal with challenges throughout their lives.

Keyword: positive schooling, resilience, youth development

School is not just about learning concepts; it is also a place where a foundation can be built for becoming upstanding adults. Every school should set a tone of respect, honesty and genuine kindness for all students. Schools play an increasingly important role in assisting youth to develop cognitive, social and emotional skills. Twenty first century schooling has been conceptualized in many different ways and has multiple components to it including an emphasis on the role of technology in changing education, new pedagogies, inter-displinary curriculum, open learning spaces and reformed teacher training to name a few (Fielding, 2001; Jackson & Davis, 2000; MacDonald & Hursh, 2006; Yates, 2007). However, a core proponent of all conceptualizations of twenty first century schooling is the need for education to develop the whole-student through social, emotional, moral and intellectual development (Cain & Carnellor, 2008; McCombs, 2004; Noddings, 1995, Palmer, 2003).

Seligman (2009) identifies that parents want from their children to grow up, to become happy, successful and confident adults. Schools aim to "educate" students and maintain high academic standards. Positive education tries to bridge the gap between these goals by teaching the skills for well-being and the skills for achievement. The vision is a school in which children can learn and achieve but also be happy, thrive, grow and flourish.

Positive education is an approach to education that draws on positive psychology's emphasis of individual strengths and personal motivation to promote learning. Unlike traditional school approaches in which teachers attempt to tailor their material to a mythical "average" student, and move the class altogether using the material through one teaching and testing style, positive schooling teachers use techniques that focus on the well-being of individual students. Teachers use methods such as developing tailored goals for each student to engender learning and working with them to develop the plans and motivation to reach their goals. Rather than pushing students to achieve at a set grade level, seen through the emphasis of standardized testing, this approach attempts to customize learning goals to individual students' levels. Instead of setting students to compete against one another, learning is viewed as a cooperative process where teachers learn to respect their students and each student's input is valued.

Several early psychologists and thinkers paved the way for the incorporation of positive psychology techniques, though they may not have yet been labeled as such, in the classroom. John Dewey was among the earliest advocates to impact the field of positive schooling. John Dewey recognized schools as primary institutions for the development of democracy. He opposed the repressive atmosphere of schools, especially elementary and secondary schools, and emphasized the importance of promoting learners' ability to absorb and recreate information in their minds. He put forth the idea of constructivism, which argues that individual learners should take information and creatively construct it according to their own personal capacities and views. This approach opposes the traditional view of education in which teachers pass down knowledge to the students through direct communication. In summary, Dewey's view of education, similar to progressive education implies that people learn best in environments that are applicable to the real world and that allow them to learn through activities and practical problem solving. Maria Montessori, the originator of the Montessori system, put forth views relating to positive schooling as well. The Montessori system is largely based on the positive psychology principle of creativity.

Elizabeth Hurlock was one of the first psychologists to actually carry out experiments with positive psychology techniques to measure the effects of positive schooling in the field of education. Hurlock studied the effectiveness of praise and reproach in the classroom, arguing that praise was a more effective long-term incentive. Her studies found that praise was more effective for children regardless of age, ability and gender.

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According to Fisher (2015), ""the emphasis on positive psychology interventions in education increases engagement, creates more curious students, and helps develop and overall love of learning".

"Positive education benefits the teacher, too. It is easier to engage with students and persist in the work they need to do master their academic material (Fisher, 2015). It creates a school culture that is caring, trusting, and it prevents problem behavior. In relation to achievement goals, expectancy beliefs, and value it is found that task goals associated positively with optimism resulted in a highly motivated student (Fadlelmula, 2010). Research has shown that motivation may be consistent and long-term if it is always paired with positive psychology interventions."

In their recent text on positive psychology, Snyder and Shane Lopez (2007) introduced major components of positive schooling for effective schools. The foundation components involve caring, trust, and respect for diversity. Teachers are seen as role models whose care and positive emotions provide the secure base that allows students to explore and achieve their academic and life goals. These foundation components of care, trust, and respect for diversity also engender a supportive atmosphere and environment in which students with different views and backgrounds can flourish.

The second set of components involves goals, plans, and motivation. Goals, especially those that are concrete, understandable, reasonably challenging, and mutually agreed upon by teacher and students, have been shown to provide a means of targeting students' learning efforts and engender productive learning (Dweck, 1999; Elliot, 2005). It is also helpful that large learning goals could be broken down into sub goals to be tackled in stages.

However, the success of class learning goals depends on making the materials relevant to students' real-life experiences. With appropriate learning goals and relevant materials, it is believed that students will become more motivated and more involved, and learn the materials that are tailored to their experience (See Dweck, 1999). Thus, the achievement of learning goals depends on careful planning on the part of the teacher who also models enthusiasm and provides energizing feedback.

Another set of components in positive schooling involves hope and societal contributions. By hope, it is meant that students will pick up the spirit of inquiry and passion in learning, expanding to increase their sense of empowerment to become lifelong problem solvers. While hopeful students will continue to learn long after leaving school or the classroom, they will share what they have learned with other learners. Thus, by becoming teachers of others, the benefits of the learning process are passed on to a wider range of people.

Why resilience is important?

WHO's upcoming agenda is -Health 2020 which states that " building resilience is a key factor in protecting and promoting health and well-being at both the individual and community levels".

Life is full of ups and downs. For Lois Murphy (cited in Masten & Obradovic, 2006, p. 15) adaptive quality of living involves two dimensions: adapting to the environment and maintaining a person's internal integration. An individual, especially a child or a young person, daily participates in many different systems (family, school, religious, cultural, recreational, & social environments) that mutually interact with his/her development. In Bronfenbrenner's bio-socio-ecological model all this systems interdependently interact with each other. Thus risk and protective factors operate across settings and at different levels in differing environments (Masten, 2008; Clay, 2005). This gives a responsibility for development of resilience to the community, and encompasses also the school system as one of the most important systems for children and young people. Environmental and social contexts of a young person make it possible to work simultaneously on reducing risk factors and promoting protective factors.

Resilience is an interactive and accumulating process of developing different skills, abilities, knowledge and insight that a person needs for successful adaptation or to overcome adversities and meet challenges. For Grotberg (1999) it consists of inner personal strengths, social and interpersonal skills, and external supports and resources, all of them contributing to essential blocks (self-confidence, self-image, responsibility, independence, initiative, effectiveness, trust) that build personal resilience.

Inner personal strengths are determined by bio-psycho-social characteristics and conditions of the individual, when he/she is seeking to find an answer on "Who I am". They enable the development of personal strengths and build the child's' self-confidence, self-image, responsibility, independence.

External supports and resources are connected to socio-cultural and environmental factors and are linked to direct and indirect interpersonal relations of individuals within the family and within the wider community (peer relationship, household rules, shared values, school, access to services, health & recreation resources, church, etc.). These "I have" features are conducive to a child's realization about the reliability of love, belonging, structure and support within the family and community. They build a child's' trust.

Social and interpersonal skills represent one's skills and knowledge capital that prepare him/her for active participation, effective communication, understanding and expressing feelings, good problem solving, setting realistic and optimistic future goals. These "I can" features build a child's initiative and effectiveness.

Masten and Obradovic (2006, p. 14) list nine adaptive systems that have a crucial role in resilience, and also more broadly in human development. When these systems are available and functional, then individual resilience is common-

- Learning systems of the human brain (problem solving, information processing)
- Attachment system (close relationships with care providers, friends, partners, spiritual figures)
- Mastery motivation system (self-efficacy processes, reward systems related to successful behaviour)
- Stress response systems (alarm & recovery systems)
- Self-regulation systems (emotion regulation, executive functioning, activation & inhibition of attention or behaviour)
- Family system (parenting, interpersonal dynamics, expectations, cohesion, rituals, norms)
- School system (teaching, values, standards, expectations)
- Peer system (friendships, peer groups, values, norms)
- Cultural and societal systems (religion, traditions, rituals, values, standards, laws).

Resilience is not just about "bouncing back." It's about "bouncing forward." Resilience doesn't just mean getting back to normal after facing a difficult situation. It means learning from the process in order to become stronger and better at tackling the next challenge. It's not limited to tragedies or major life events, either. Resilience applies to more common struggles too. In fact, when kids respond to any type of challenge including trouble with learning it creates an

opportunity to bounce forward. It helps them learn coping skills and how to find solutions to problems. The key to resilience is mindset: how we think about whatever challenge we're facing.

Children who develop resilience are better able to face disappointment, learn from failure, cope with loss, and adapt to change. We recognize resilience in children when we observe their determination, grit, and perseverance to tackle problems and cope with the emotional challenges of school and life.

Resilience is not a genetic trait. It is derived from the ways that children learn to think and act when faced with obstacles large and small. The road to resilience comes first and foremost from children's supportive relationships with parents, teachers, and other caring adults. These relationships become sources of strength when children work through stressful situations and painful emotions.

Which kinds of children need help?

Children who are-

- Not openly express their feelings
- Put on a front (even though it's obvious they are struggling)
- Not fully engage in what's happening around them
- Not fully connect with other children and adults in their lives
- Tend to give up if things don't go well in the first instance
- Not appear confident in dealing with situations themselves (but might not make a fuss about it).

What are the personal characteristics of the resilient children?

Eight key qualities/predispositions were derived as the most characteristic personal attributes of the resilient child (Clarke & Clarke, 1984; Garmezy, 1985; Werner & Smith, 1988; Benard, 1993; all cited in Murray et al., 2003):

- Having stable relationships with peers.
- Possessing well developed problem-solving skills.
- Considering realistic future plans.
- Having a positive sense of being able to achieve and deal effectively with tasks.
- Experiencing success in one or more areas of their life.
- Being able to communicate effectively.
- Possessing a strong attachment with at least one adult.
- Acceptance of responsibility for themselves and their behaviour.

Why resilience is an important component of positive schooling?

Classroom or school can also be viewed as a system that may be threatened by adversities like exclusion, criticism, bullying and inappropriate learning methods. This steers the need for promoting resilience in the school context and establish resilient classrooms. Special attention should be dedicated to children with special needs, whose vulnerability can increase and cause new problems (co morbidity) when their needs are overlooked or neglected (Margalit & Idan, 2004).

Building resilience really comes through the development of social and emotional skills, which include coping skills. These are the same skills that will help children deal with stress, so it follows that building resilience will really help kids deal with stress. When teaching social and emotional skills (such as understanding & managing emotions, getting along with friends, & making good decisions), it can be useful to draw on some of the actual stressors that children are facing in their real worlds. Schools have a range of social and emotional learning initiatives they use to explicitly teach these skills and practise them throughout the school day. This way, they can learn practical skills to use in the real world. It's also important not to ignore basics like helping children sleep and eat well, as we know these are associated with stress.

School staff and parents can play a really important part in their modelling and approach during stressful times. Children learn (& take cues) from the adults around them, so it's important for adults to be mindful of how they approach stressful situations and the skills they use to resolve challenges. They can also play an active role in supporting children during stressful times. They can do this by facilitating problem-solving steps to work through situations positively. Over time, these skills can then be developed by the child so they are able to more independently resolve difficulties. Chatting about what happened afterwards can also help to reinforce the learning and remind the child that things can turn out okay even when it's been a bit stressful.

Teacher's roles

Teachers facilitate resilience by helping children think about and consider various paths through adversity. They also help by being resources, encouraging student decision-making, and modeling resilient competencies.

Five ways to cultivate resilience

Promote self-reflection through literary essays or small-group discussions: Short written essays or small-group discussion exercises that focus on heroic literary characters are an excellent way, particularly for younger students, to reflect on resilience and the role it plays in life success. After children have read a book or heard a story that features a heroic character, encourage them to reflect by answering the following questions.

- Who was the hero in this story? Why?
- What challenge or dilemma did the hero overcome?
- What personal strengths did the hero possess? What choices did he or she have to make?
- How did other people support the hero?
- What did the hero learn?
- How do we use the same personal strengths when we overcome obstacles in our own lives? Can you share some examples?

Encourage reflection through personal essays: Written exercises that focus on sources of personal strength can help middle and high school students learn resilience-building strategies that work best for them. For example, by exploring answers to the following questions, students can become more aware of their strengths and what they look for in supportive relationships with others.

- Write about a person who supported you during a particularly stressful or traumatic time. How did they help you overcome this challenge? What did you learn about yourself?
- Write about a friend that you supported as he or she went through a stressful event. What did you do that most helped your friend? What did you learn about yourself?
- Write about a time in your life when you had to cope with a difficult situation. What helped and hindered you as you overcame this challenge? What learning did you take away that will help you in the future?

Help children (and their parents) learn from student failures: In her insightful article Why Parents Need to Let Their Children Fail, published in The Atlantic, middle school teacher Jessica Lahey touched on a topic near and dear to every teacher's heart: How do I teach students to learn and grow through failure and setbacks when their parents are so intent on making them a shining star? The truth is that learning from failure is paramount to becoming a resilient young person. Teachers help when they:

- Create a classroom culture where failure, setbacks, and disappointment are an expected and honored part of learning.
- Establish and reinforce an atmosphere where students are praised for their hard work, perseverance, and grit, not just for grades and easy successes.
- Hold students accountable for producing their own work, efforts from which they feel ownership and internal reward.
- Educate and assure parents that supporting kids through failure builds resilience-one of the best developmental outcomes that they can give their children.

Bring discussions about human resilience into the classroom: Opportunities abound to connect resilience with personal success, achievement, and positive social change. Expand discussions about political leaders, scientists, literary figures, innovators, and inventors beyond what they accomplished to the personal strengths they possessed and the hardships they endured and overcame to reach their goals. Help students learn to see themselves and their own strengths through these success stories.

Build supportive relationships with students: Good student-teacher relationships are those where students feel seen, felt, and understood by teachers. This happens when teachers are attuned to students, when they notice children's needs for academic and emotional support. These kinds of relationships strengthen resilience. When adults reflect back on teachers who changed their lives, they remember and cherish the teachers who encouraged and supported them through difficult times.

School's roles

According to Waters "A school curriculum that incorporates well-being will ideally prevent depression, increase life satisfaction, encourage social responsibility, promote creativity, foster learning and even enhance academic achievement."

Michelle McQuaid, a teacher of positive education in Australian schools, believes "success is achieved when a school leadership team collectively supports the idea of making the well-being of students as important as their academic achievements and inviting, connecting and empowering the whole school community around this idea," including administrators, teachers, parents and students.

"My vision is for children to receive an education that teaches them how to flourish intellectually, emotionally, socially and physically. For this to happen, they need to be a part of an education system that is flourishing where leadership teams feel challenged and supported, where teachers feel engaged and appreciated, and parents feel confident and empowered," McQuaid says.

Dr. Martin Seligman's has been working on incorporating his expertise on positive psychology into education. He believes that positive psychology in education can decrease depression in younger people.

Seligman uses his PERMA model (the five elements of well-being) to teach in schools to help the students well-being and flourish.

P- Positive Emotions: Feeling positive emotions such as joy, gratitude, interest, hope.

E-Engagement: Being fully absorbed in activities that use your skills yet challenge you.

R-Relationships: Having positive relationships.

M-Meaning: Belonging to and serving something you believe is bigger than yourself.

A-Accomplishment: Pursuing success, winning achievement and mastery.

Handerson (2007) presented resilience wheel embraces a child or youngster with external supportive systems and stimulates her/him for active participation of solving the recognized problem (s), based on activation of individual strengths. The more systems we include, the more structure, help and support a child gets.

Provide opportunities For meaningful participation
Increase pro-social bonding
Set and Communicate high Expectations
Set clear, consistent boundaries
Provide caring and Support
Teach "life skiils"
Build resiliency in the environment
Mitigate risk factorsin the environment

Picture: The resilience wheel (Handerson, 2007, p.10)

Step 1: Teachers should care about positive, respectful and caring relationships with students and among them. Through forming close and sustained relationships, teachers can support students to develop relationships and skills, confidence, help them learn to manage emotions and behaviours. They should also stimulate students to join different extracurricular activities that enhance students' talents and social skills.

Step 2: School rules give students structure. By setting and maintaining clear assignments and boundaries students get a frame where they know what is expected from them and what the consequences are. That gives them a sense of safety and experience of cohesive coexistence in the class.

Step 3: Teachers should be high valuing and stimulating learning approaches and methods that enhance developing life skills and strategies that are commonly needed every day. Life skills such as communication, collaboration, problem solving, conflict resolution, planning, learning motivation, basic academic skills, give a fundamental base and the strength needed for successful coping with new lifespan challenges and avoiding inappropriate behaviour.

Step 4: Providing care and support is one of most crucial things in the resilience wheel, because children and youth usually don't have enough knowledge, experience and strength to cope with problems

on their own. A caring relationship with an important adult is one of the most important protective factors in building resilience in children and young people. Students who are positively engaged in a relationship with a teacher also improve their learning efficiency because they are more motivated to collaborate within a caring and safe school environment.

Step 5: Setting high, but realistic, expectations involves identifying and supporting individualized learning steps. It should not be directed towards demanding instant perfection but in stimulating creative thinking and learning. Low expectations and acceptation of failures demotivate students' learning engagement and stimulate them in searching inappropriate ways to get attention.

Step 6: Providing opportunities for "meaningful contribution" to schoolmates and others gives sense of value and necessity within the school, class (community). It gives the opportunity to use gathered knowledge and skills in various situations, to activate higher mental processes, to practice and develop life skills (intro & interspectional skills, self control, problem solving, planning, decision making, setting goals, collaborating with an authority & school mates, supporting the others, persisting, being flexible). We should never underestimate the value of volunteering - by helping the others a young person can get a new life perspective.

Parents' roles

- Praise children for effort rather than intelligence. When you tell a child "You are so smart," they don't understand what they have done and how to repeat it, so they fear making mistakes or view failures as being dumb. When you praise effort, children understand they can influence the result, and learn to view failures as learning opportunities.
- Provide a consistent family routine.
- Take an interest in what your children are learning.
- Encourage special interests.
- Turn off the TV and encourage children to have free playtime where they use their imagination and creativity.
- Give kids achievable jobs at home to develop a sense of responsibility and self-mastery.
- Celebrate who your children are, not just what they achieve.
- Help your children discover their strengths, including character strengths like kindness.
- Show your children how to master challenges and overcome frustrations with an optimistic and not pessimistic approach.
- Teach and show your kids how to go on the hunt for gratitude. Share things that are going well.
- Keep lobbying your children and educators to create a learning environment that allows your child to flourish.

Which types of programs are working in schools of different countries for the positive education?

Some of them are followings: Green (2015) denoted that- In some schools with Positive Education, young boys and girls aged 14 to 15 completed a 40-minute timetabled lesson on the skills of well-being every 2 weeks for 2 years. They found that the students were able to gain a full understanding of what factors helped a life thrive, flourish, as well as teach them some practical skills for everyday use.

A meta-analysis conducted by Sin and Lyubomirksy (2009) with 4,266 participants found that positive psychology interventions do increase happiness and decrease depressive symptoms significantly.

The Penn Resiliency Program (PRP) was developed by researchers at the university of Pennsylvania. Results from 19 controlled studies of PRP. The major goal of the PRP curriculum is to increase students' ability to handle day-to-day stressors and problems that are common for most students during adolescence. PRP promotes optimism by teaching students to think more realistically and flexibly about the problems they encounter. PRP also teaches assertiveness, creative brainstorming, decision making, relaxation and several other coping and problem solving skills.

Perth College (an Anglican school for girls in Western Australia) trains its staff in positive psychology and coaching (see how these two fit together here) and have full units on ethical issues and social justice.

At the Geelong Grammar School (Australia), they believe that well-being should be at the heart of education. As such, they have implemented a whole-school approach to Positive Education. This means that the principles of personal well-being are not only taught to students, but also to parents, teaching and non-teaching staff, and the wider community.

IPEN is a network that aims to bring teachers, parents, academics, student, schools, colleges, universities, charities, companies, and governments together to promote positive education.

Positive Education Schools Association (PESA) is a school association working on embedding Positive Psychology into school programs, aiming to improve student well-being and academic performance. This association help schools and individual teachers to gain access to resources, the latest research, and enabling connections to the leaders in the field of Positive Psychology.

A report related to promoting emotional health, well-being and resilience in primary report, is presented by Robin Banerjee et al. (2016) highlight the important inter-relations among:

- The organisation and coordination of school systems, structures, policies and environment to foster school connectedness;
- The pedagogical principles of good teaching and learning across the entire curriculum;
- Specific curricula/lessons to promote the social and emotional skills (including cognitive, emotional, behavioural, motivational & relational aspects) that underpin emotional health and well-being and that serve to reduce socio-emotional difficulties;
- The work of specialist staff and services both within the school and as a bridge to external health and education professionals;
- The integration of universal provision for all pupils and targeted work to support groups and individual pupils at risk of difficulties in this area.

Corstone Resilience Programs empower marginalized youth around the world to "bounce back" and thrive despite significant adversity. Steve Leventhal has made the mission of his foundation, Corstone, the teaching of the very poorest of girls from the slums of India. They teach positive psychology to thousands of girls in Bihar and find increased emotional resilience, health knowledge, attitudes toward gender equality, and use of clean water.

In India, the SMHP (School Mental Health Program) is yet to be recognized and initiated as a part of the health component in schools. Department of Public Instruction (DPI), Karnataka, in collaboration with NIMHANS planned to implement the NIMHANS model of the health promotion using LSE in four diverse districts (Bangalore rural, Bangalore urban, Udupi, Haveri) covering selected 261 secondary schools and 55,000 adolescents.

Conclusion

Building resilience doesn't always come easily. Resilience is not just about "getting back normal" after facing a difficult situation. It's about learning from challenges and finding the motivation to tackle the next one. Learning from challenges can help kids build self-awareness and self-advocacy skills and in it positive schooling and parents can help them.

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Psychometric properties and confirmatory factor analysis of the school climate inventory

Shweta Singh*

School climate is a multidimensional construct. School climate represents the ways students feel about the school environment. These include perceptions regarding safety, teaching and learning, and relationships within the school. It has been found that student perceptions of school climate are positively correlated with academic achievement (Brookover et al., 1978), and negatively correlated with risky behaviors (Bandyopadhyay, Cornell, & Konold, 2009; Bayar & Ucanok, 2012; Wang, Berry, & Swearer, 2013). Present study was designed to adopt a School Climate Inventory which examines the school climate of adolescents of Hindi speaking states of India. This inventory name is Georgia Brief School Climate Inventory (GaBSCI). It is a measure of student perceptions of school climate, developed by Nick White, Tamika La Salle, Jeffrey S. Ashby and Joel Meyers (2014). In the present study 8 items out of 9 items of the original scale have been taken. A total 1000 adolescent students from different Hindi speaking states of India responded to the GaBSCI. An Exploratory Factor Analysis and a Confirmatory Factor Analysis were performed to test the factorial structure of the GaBSCI and internal consistency of the scale was studied. The results supported scale multidimensionality. The obtained Cronbach's alpha revealed good internal consistency with a value of 0.79. Based on the psychometric properties obtained, it is concluded that GaBSCI is a reliable measure to assess the parent-adolescent relationship of Hindi speaking states of India.

INTRODUCTION

Educators have studied school climate for over 100 years (Cohen, McCabe, Michelli & Pickeral,2009). Over the last 3 decades there has been a growing body of empirical research that has studied which factors color and shape the learning environment at school (Cohen et al., 2009; Freiberg, 1999; National School Climate Council,2007). Over the last 3 decades, educators and researchers have worked to identify specific elements that make up school climate. Although there is not "one list" that summarizes these elements, virtually all researchers suggest that there are four major areas that are essential to pay attention to : *Safety* (e.g., rules and norms; physical safety; social-emotional safety); *Relationships* (e.g., respect for diversity; social support; adults; social supports:
students; leadership); *Teaching and learning* (e.g. social, emotional, ethical and civic learning; support for learning; professional relationships); and, the *Institutional environment* (e.g., school

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Connectedness / engagement; physical surrounding) School climate refers to the quality and character of school life. School climate is based on patterns of students', parents' and school personnel's experience of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures. A sustainable, positive school climate fosters youth development and learning necessary for a productive, contributing and satisfying life in a democratic society. This climate includes:

- Norms, values and expectations that support people feeling socially, emotionally and physically safe.
- People are engaged and respected.
- Students, families and educators work together to develop, live and contribute to a shared school vision.
- Educators model and nurture attitudes that emphasize the benefits and satisfaction gained from learning.
- Each person contributes to the operations of the school and the care of the physical environment.

School climate has been defined in various ways; however, a general consensus has emerged suggesting that "school climate is a multidimensional construct that includes organizational, instructional, and interpersonal dimensions" (Loukas & Robinson, 2004, p. 210). Wang, Berry, and Swearer (2013) contend that positive school climate is essential to prevent bullying. A healthy school climate leads to more positive relationships with peers and adults, as well as an increased likelihood that students will feel supported and be encouraged to seek help when bullying incidents occur (Bayar & Ucanok, 2012; Wang et al., 2013).

Georgia Brief School Climate Inventory (GaBSCI) is a measure of student perceptions of school climate, developed by Nick White, Tamika La Salle, Jeffrey S. Ashby and Joel Meyers (2014). The brevity of the 9-item instrument makes it ideal as a general measure that can be used to monitor student perceptions of school climate. There are various measures have been used to examine student perceptions of school climate, and scales range from 29 to more than 100 items (e.g., California Healthy Students Survey: Furlong, Greif, Bates, Whipple, & Jimenez, 2005; Comer Development Program Climate Survey: Haynes, Emmons, Ben-Avie, & Comer, 2001; Comprehensive School Climate Survey: Stamler, Scheer, & Cohen, 2009; Delaware School Climate Survey: Bear, Gaskins, Blank, & Chen, 2011). Furlong and colleagues (2005) suggested the need for a brief measure of student perceptions of school climate to monitor climate on an ongoing basis. They indicated that such an instrument should be simple to administer, inexpensive, reliable, and valid. Similarly, Bandyopadhyay et al. (2009) reviewed the difficulty or impracticality of administering detailed school climate

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surveys when exploring topics related to school climate, such as bullying, due to time constraints in the academic setting.

Firstly GaBSCI was designed by Cohen, McCabe, Michelli & Pickeral,(2009), to meet the aforementioned criteria. It is a short measure intended to provide schools with an overall understanding of how students perceive school climate along three of the dimensions of school climate (teaching and learning, relationships, and safety). Further, because the scale is brief, it
can be administered on an ongoing basis to assess perceptions of climate over time. Examining changes in perceptions of climate can allow researchers to understand how perceptions change during transitional periods (e.g., from elementary to middle school), and also to identify changes in patterns of student's perceptions within middle school or high school. Thus White et al. (2014), examined reliability and validity of the GaBSCI to provide further support for using this brief measure to monitor school climate over time for program evaluation or as a measure of student perceptions of school climate. They conducted their study on a total of 130,968 sixth- and eighth-grade students in public middle schools in a southeastern state. In order to understand the students' perceptions of school climate, this research investigation focused on nine items related to school climate (e.g., "I like school" and "I feel successful at school"). The nine items were selected because they were representative of the items included on more comprehensive measures of school climate, addressing the following three of the four dimensions of school climate discussed by Cohen et al. (2009): Safety, Teaching and Learning, and Relationships.

Participants chose from the following response options for the first seven items: *always* (scored as 2), *sometimes* (scored as 1), and *never* (scored as 0). Responses to the school safety item were *always* (scored as 3), *sometimes* (scored as 2), *not really very safe* (scored as 1), and *no—it's dangerous* (scored as 0). Responses to the item, "I know an adult at school that I can talk with if I need help," were "Yes" (scored as 1) and "No" (scored as 0). The GaBSCI was the sum of the scores on these items and ranged from 0 (representing a school climate that is perceived as poor) to 18 (representing a school climate that is perceived as ideal).

Objective: The present study aims to explore the factorial structure of GaBSCI from an Exploratory Factor Analysis (EFA) and a Confirmatory Factor Analysis (CFA).

METHOD

Participants: Data was collected on a sample of 1000 adolescent students from different colleges of Hindi speaking states of India.

Instrument: The original scale of GaBSCI is having 9 items with three dimensions: Safety, Teaching and Learning, and Relationships, developed by Nick White, Tamika La Salle, Jeffrey S. Ashby and Joel Meyers (2014). A Cronbach's alfa of 0.71 was found.

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As for local requirement in the present study 8 items out of 9 items of the original scale have been taken and adopted it in Hindi. Items are rated on 3 points scale: never (scored as 0), sometimes (scored as 1) and always (scored as 2). The adopted GaBSCI indicated good psychometric properties, with respect to internal validity and content validity. A Cronbach's alfa of 0 .79 was found and item-total correlations ranged between 0.56 and 0.47. It is composed of a two fatorial structure that includes items referring to aspects related to Conducive Academic Environment and Excellent Teaching Attitude.

Methodological Procedure: Data collection was conducted from different colleges of Hindi speaking states of India. Questionnaire was delivered to the students. Before starting the infill, the following description could be read: "Please carefully read each of the following statements and answer them about you, the way you think, feel and act". Individuals should respond according to the degree to which they considered the items to better describe them.

Statistical Procedure: A sample of 1000 adolescents was used to carry out the Exploratory Factor Analysis (EFA) ,with respect to descriptive analysis, the minimum and maximum values, as well as means and standard deviations were yield for the total sample.

In the analysis of dimensionality of the 8 items of the GaBSCI, an exploratory factor analysis (EFA) was conducted, using the computer program SPSS (Statistical Package for the Social Sciences –version 16.0 for Windows)

The GaBSCI was studied using a principal components analysis, followed by a varimax rotation . Selection of the number of factors to be rotated was based on the Kaiser criteria of five factors. Items were kept based on the values of factorial weights, commonalities, item-total correlations and alfa values if the item was to be deleted. To ensure the adequacy of the data, the Kaiser-Meyer-Olkin (KMO) test was used, which ranges between 0 and 1, being .60 the minimum value to consider the analysis good (Tabachnick & Vivek, 2011). Pestana & Gageiro (2005) reported that values below.50 are unacceptable, between .50 and .60 are considered bad, from .60 to .70 acceptable, between .70 and .80 medium, from .80 to .90 good and values above .90 are considered very good. The Bartlett's Test of Sphericity was also used to test the adequacy of the data to perform a factor analysis.

The internal consistency (reliability) of the scale was calculated using Cronbach's alpha (value 0 .79 is considered reliable according to Pestana and Gageiro, 2003). With regard to item-total correlations, values below 0.30 suggest that it may be more suitable to eliminate the item (Osborne & Castello, 2005).

To perform the confirmatory factor analysis (CFA) the computer software SPSS AMOS,version 18 for Windows was used. Firstly, the assumptions underlying this analysis were verified, considering the

absolute values of skewness (sk) and kurtosis (ku). Sk values > |3| and ku values > |10| indicate violations of principles of normality (Kline, 2005). Mahalanobis distance (MD2) \as analyzed to identify possible outliers. The quality of adjustment of the model was evaluated based on a number of measures: the Chi-square (χ2/df), Goodness-of-Fit Index (GFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Parcimony comparative fit index (PCFI), Parcimony Goodness-of-Fit Index (PGFI) and Root Mean Square of Approximation (RMSEA). In order to evaluate the adjustment of the model, the following values were considered: χ2/df inferior to 2 was considered good, TLI and CFI were considered good when superior to .90(Kline, 2005; Maroco, 2010). GFI varies between 0 and 1, considering that the closer to 1, the better the adjustment of the model (Maroco, 2010). PNFI was considered good if superior to .60 and very good if higher than .80. For the PGFI and PCFI, the indexes are considered good when between .60 and .80, and very good if over .80 (Maroco, 2010). When it comes to RMSEA, values between .05 and .10 were considered good and values lower than .05 were considered very good (Maroco, 2010; Meyers, Gamst, & Guarino,2013). After the CFA was conducted, the adjustment indices, the factorial weights ($\lambda \geq .50$) and individual reliabilities ($R2 \geq 0.25$) were analyzed (Maroco, 2010).

RESULTS

Exploratory factor analysis (EFA): The exploratory factor analysis (EFA) aimed to test the factorial structure proposed by the original authors, Nick White, Tamika La Salle, Jeffrey S. Ashby and Joel Meyers (2014), and consequently validate it for adolescents of the Hindi speaking states of India. For this purpose we used a sample of 1000 adolescents.

In the first principal component analysis, the viability of EFA was guaranteed using the KMO test (.874), considered acceptable, and Bartlett's Sphericity Test [χ2(1000)=1.793; p<.001], which proved to be significant. All individual items presented values which, according to Kline (2005), do not overly differ from the values considered appropriate, allowing to affirm that there was no violation of normality principles.

The set of 8 items from the GaBSCI was subjected to principal component factor analysis, using a varimax rotation and structure of two factors that explained 53.21% of the total variance was found.

Above table shows that the factors loading on conducive academic environment are six and excellent teaching attitude are 2 (if you have strong theoretical and practical reasons, a factor contain two items, for example, Gosling, Rentfrow & Swann Jr. (2003) big five scale). The properties of the items and internal consistency were studied through the analysis of the means and standard deviation of the item, the item-total

Table 1: *Factorial Weights and Commonalities (h^2)*

Item No.	Items	Dimensions	Factor	h^2
1.	I like school.	Conducive academic environment	.616	.379
2.	I feel successful at school.	Conducive academic environment	.709	.503
3.	I feel my school has high standards for achievement.	Conducive academic environment	.656	.430
4.	My school sets clear rules for behavior.	Conducive academic environment	.763	.582
5.	Teachers treat me with respect.	Excellent teaching attitude	.568	.323
6.	The behaviors in my class allow the teachers to teach.	Conducive academic environment	.640	.410
7.	Students are frequently recognized for good behavior.	Excellent teaching attitude	.897	.805
8.	School is a place at which I feel safe.	Conducive academic environment	.460	.212

correlations and Cronbach's alpha value if the item was to be deleted (Table-2).

Table-2: *Properties of the items and internal consistency of the final factorial*

Item no.	Items	M	SD	r	a
1.	I like school.	1.7210	.524	.561	.767
2.	I feel successful at school.	1.6260	.544	.539	.770
3.	I feel my school has high standards for achievement.	1.5230	.627	.551	.767
4.	My school sets clear rules for behavior.	1.5720	.610	.538	.769
5.	Teachers treat me with respect.	1.6810	.538	.559	.767
6.	The behaviors in my class allow the teachers to teach.	1.5310	.624	.501	.776
7.	Students are frequently recognized for good behavior.	1.5100	.613	.348	.800
8.	School is a place at which I feel safe.	2.6000	.588	.476	.779

Confirmatory Factor Analysis (CFA)- We performed CFA based on the variance – covariance matrix using the AMOS 18 statistical package for testing the two -factor model. Parameters were estimated for the CFA model based on the maximum likelihood procedure (sometimes called path analysis) involving fitting the variance and covariance among observed scores. AMOS therefore created a covariance matrix, including the variances and covariances among observed scores.

It was estimated to identify the two factor model in order to estimate the model parameters. Factor loadings and the variances and covariances among the errors were used to identify the two- factor model. In conducting CFA, no warning messages were received from AMOS regarding parameter estimates. Based upon this information, the two-factor model passed the "rules" for identification.

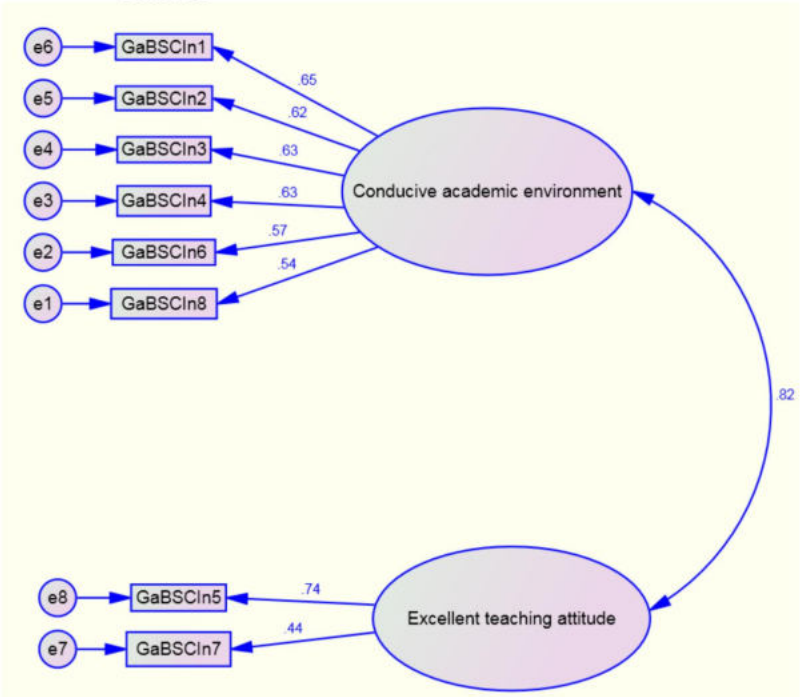
Following identification of the two-factor model, we examined the assessment of universal fit pertaining to the quality of the model in AMOS in order to support or reject its appropriateness for the population examined. The next step was to illustrate the observed (items) and unobserved (factors) in the hypothesized model (Figure 1). The observed variables are represented as rectangles; ellipses represent the unobserved variables and the circles represent measurement error. The measurement model consists of two conducive academic environment and excellent teaching attitude. The arrow between the unobserved variable and observed variable represents a regression path and its number represents the standardized regression weight. The double-headed arrows represent the correlation between two unobserved variables (factor covariance) of the model.

Table-3: *Goodness-of-fit indices for the two-factor model of the GaBSCI (N=1000)*

Model	X2	df	p	X2/df	GFI	CFI	RMSEA
N	65.5	19	.000	3.45	.984	.974	.050

The PARS13 presented a x2/df=3.45 (According to Robert Ho 2006, in case of large samples, the power of the statistical test underlying the SEM approach is very high. A approach model can easily fail to fit the data statistically, even though the discrepancy between the sample covariance matrix and that reproduced by the parameter estimates of the proposed model may be insignificant from a practical point of view. With these limitations, the researcher should complement the chi-square measures with other goodness-of-fit-measures.) & p< .000, which are good. Quality adjustment indices were very good, GFI .984 (varies between 0 and 1, considering that the closer to 1, the better the adjustment of the model); CFI .974 (good when superior to .90) and RMSEA .050 (values between .05 and .10 were good and values lower than .05 were considered very good) (Maroco, 2010).

Figure -1 : *Hypothesised 8-items model of factorial structure of the GaBSCI*



Discussion: The present study's main objective was to adopt and explore the psychometric properties of the adopted 8 items of the GaBSCI developed by Nick White, Tamika La Salle, Jeffrey S. Ashby and Joel Meyers (2014), on adolescents of Hindi speaking states of India.

Georgia Brief School Climate Inventory (GaBSCI) is a measure of student perceptions of school climate. It is a short measure intended to provide schools with an overall understanding of how students perceive school climate along two of the dimensions of school climate i.e. conducive academic environment and excellent teaching attitude.

In the present investigation a two factorial structure was found, consisting of 8 items, which differs from the original scale by Nick White, Tamika La Salle, Jeffrey S. Ashby and Joel Meyers (2014). This scale is composed of two factor that explains 53.21% of the total variance.

The factorial structure obtained showed appropriate values in relation to item –total correlations and its respective Cronbach's alfa values. Item-total correlations found were greater than .30 and Cronbach's alfa was considered reliable i.e. 0.79 (Pestana and Gageiro, 2003).

Based on the data, we generated a two-factor model using Varimax rotation. To determine the psychometric properties of GaBSCI,

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the specification of the two-factor model; assessment of fit between the model and observed variables (items) were presented through the CFA approach. The measurement model consists of two interrelated constructs, conducive academic environment and excellent teaching attitude. .

The GaBSCI presented a good quality adjustment indices i.e. GFI .984; CFI .974 and RMSEA .050 (Maroco, 2010).Consequently, we could conclude that the GaBSCI 8 items provides a valid and reliable scale to assess adolescents' ability to their perception of school climate.

Limitations of the Study: It is important to consider some limitations of this study. Since this scale is mend for adolescents only it is advisable to reassess the psychometric properties of this scale for other population in Indian context. It was administered only Hindi speaking states of India thus it is advisable also that reassess the psychometric properties of this scale on other states of India. GaBSCI 8 items provide a valid and reliable scale to assess adolescents' ability to their perception of school climate.

Conclusions: The results of this study supported the usefulness of the GaBSCI as a brief, reliable and psychometrically sound scale for measuring perception of school climate of the adolescents. We recommended that scale should reassess on different population and other states except Hindi speaking states for measuring the perception of school climate.

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Article 6

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RESILIENCE, EMOTION REGULATION, PEER RELATIONSHIP, HUMOR AND BODY-ESTEEM IN INDIAN COLLEGE STUDENTS

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RESILIENCE, EMOTION REGULATION, PEER RELATIONSHIP, HUMOR AND BODY-ESTEEM IN INDIAN COLLEGE STUDENTS

Abstract

The aims of the present study were (1) to explore sex-related differences and (2) to estimate the associations between resilience, emotion regulation, peer relationship, humor, and body-esteem. A sample of Indian college students (N = 1000) took part in this study. They responded to the Hindi versions of the resilience scale, emotion regulation questionnaire for children and adolescents, peer relationship scale, humor style questionnaire, and body-esteem scale. Results indicated that men obtained higher mean scores on resilience, peer relationship, humor, and body-esteem than women. All the correlations between the variables were statistically significant and positive. It was concluded that those who consider themselves as resilient experienced greater emotion regulation, body-esteem, humor, and peer relationship.

Keywords

resilience, emotion regulation, peer relationship, humor, body-esteem

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1. INTRODUCTION

One of the main trends in contemporary psychology is the emergence of positive psychology. Positive psychological science and practices are in vogue for the identification and understanding of human strengths and values and helping people live happier and more productive lives (Singh & Singh, 2008; Singh & Malik, 2012; Singh & Singh, 2013; Shrivastava & Singh, 2014; Abdel-Khalek & Singh, 2014). It studies the strong aspects of human life and virtues, such as well-being, happiness, satisfaction, optimism, hope, insight, honesty, persistence, resilience, rationality, mental health, religiosity, creativity, courage, and meaningfulness, among other subjects (see, e.g., Argyle, 2002; Aspinwall & Staudinger, 2003; Carr, 2004; Chang, 2001; Diener, Suh, Lucas, & Smith, 1999; Loewenthal, 2000; Seligman, 2002; Snyder & Lopez, 2002; Veenhoven, 2011).

Resilience is one of the familiar concepts and constructs studied in optimistic psychology, and it refers to successful adaptation in the presence of threats and challenges (Hanewald, 2011). Resilience is passive resistance against threatening conditions and damages, but only the resilient person has active participation in his surrounding environment (Jokar, 2007). This construct is particularly crucial in the middle of adolescence because this period is accompanied with extensive social, biologic, cognitive, and neurotic changes. In this period, adolescents pass childhood ultimately and enter a new stage in which they encounter many problems (Khabbaz, Behjati, and Naseri, 2011). On the other hand, as mentioned by Smith and Carlson (1997), adolescents consider stressful events more than adults. They may have unhealthy behaviors or negative attitudes (Smokowski, Reynolds, and Bezruczko, 2000). As one of protective factors against risky factors in the future, resiliency in adolescents, especially those in the middle of this period, is a new area that has been paid attention by researchers. According to most researchers, resiliency is a good idea with high applied value for helping people while facing difficulties and protecting them against dangers during their lives (Khabbaz, Behjati, and Naseri, 2011). Lack of resiliency in middle of adolescence can result in impulsiveness, weak reactive control, and internal problems (Smiley, 2011). Resilient adolescents have personal features such as social competence, independency, discipline, patience, optimism, and higher intelligence. They are good in problem solving. Having target and personal control, high self-esteem and concentration on strengths are other features of resilient adolescents. Their families have mutual emotion and affection with their parents (Kiani Dehkordi, 2004).

Emotion regulation is defined as the ‘‘processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions’’ (Gross, 1998, p. 275). It is difficult to classify a specific regulation strategy as maladaptive or adaptive without considering the context in which the strategy is used (Joormann & D’Avanzato, 2010). Previous research, however, has led to a functional differentiation of strategies based on their ability to facilitate adaptive versus maladaptive responding. Habitual use of expressive suppression, for example, has been associated with lower social support, reduced well-being (Gross & John, 2003), and adjustment problems (Sheldon, Ryan, Rawsthorne, & Ilardi, 1997). On the other hand, reappraisal has been associated with positive outcomes, including better social support, better interpersonal functioning, and increased well-being (Gross, 1998; Gross & John, 2003). Accordingly, whereas expressive suppression and rumination have been considered maladaptive emotion regulation strategies, reappraisal has been considered an adaptive strategy.

It has been widely accepted and documented in the literature that peer relations are an integral contextual factor in adolescent development (Steinberg and Morris 2001). Increasingly within recent literature, peer relations have been examined as both potential risk and protective factors among adolescents. Peer relationships during adolescence specifically may be beneficial as youth begin to spend less time with their families and more time with peers and alone (Larson and Richards 1991). As peers become more important in social influences, they may also provide positive quality support. Berndt's (1992) theoretical perspective on peer influences during adolescence emphasized the positive effects of close friendships. Berndt argued that close positive interactions with friends foster interpersonal and intrapersonal protective buffers, such as social support and increased self-esteem, which promote adolescents' abilities to cope with stressful events. This is consistent with the "Resilience Portfolio Model," which suggests that when youth establish assets at multiple socio-ecological levels, including intrapersonal strengths (e.g., emotion regulation capacity), and interpersonal resources (e.g., supportive relationships), they are more likely to positively adapt when faced with adversity (Grych et al. 2015).

In a much broader sense, humor is considered a multifaceted construct consisting of an amalgamation of affective, cognitive, and behavioral elements (Martin, 2004). However, Robert and Yan's (2007) conceptualized humor at work as a combination of a motivation, affect, and cognitions. Humor is defined here as a general positive attribute (e.g., like to laugh and joke, bring smiles to other people), that contribute most strongly to life satisfaction (Peterson, Ruch, Beermann, Park, & Seligman, 2007). Of particular interest from a resiliency perspective is that several positive character strengths, such as kindness, humor, leadership, love, and social intelligence, all exibited significant increases in growth following experiences with major traumatic events, such as a life-threatening accident, attack, or illness (Peterson et al., 2008). Other research has examined how the personal use of humor may contribute, in a positive manner, to dealing with a wide variety of life situations across the life span. This work includes the innovative use of daily filming to document at-risk adolescents' use of humor to enhance socio-emotional functioning during typical encounters (Cameron, Fox, Anderson, & Cameron, 2010); the examination of high school students' use of humor to cope with stress during college preparation (Shaunessy & Suldo, 2010); and the use of humor by elderly women when making upsetting and painful self-disclosures (Matsumoto, 2009).

Body-esteem refers to self-perception (Franzoi& Shields, 1984) and self-evaluation (Mendelson & Mendelson, 2001; Taylor, Doane, & Eisenberg,2013; Nelson, Kling, Wängqvist, Frisén, & Syed, 2018) that encompass multi-dimensional concepts including one's emotions, attitudes, and feelings toward one's own body and appearance. This concept is very much equivalent to that of body satisfaction or satisfaction with one's own body. Body-esteem was defined in Kim and Kim (2015) as a concept relevant to positive body image, with which one positively accepts the emotions caused by one's subjective perception and evaluation of one's own body and values and loves one's body. Body-esteem is formed and changes complexly with diverse social and psychological influences. Among such external factors, the sociocultural pressure on body image resulting from parents, media, and peers (tripartite influence) has been investigated by numerous researchers You, Shin & Kim, (2018); Ormsby, Owen & Bhogal (2018); Valois et al. (2019). Their studies reported that the influence of significant others on body image exerted negative effects on individuals' perception and internalization of body image and overall satisfaction with their bodies, directly and indirectly.

The general aim of the current investigation was to explore the associations between resilience, emotion regulation, peer relationship, humor, and body-esteem among a sample of college students from India. This study was designed to test the following hypotheses: (1) sex-related differences will be significant for the study variables in favor of men, (2) the correlations will be statistically significant and positive between the study variables.

2. METHOD

2.1 Participants: A convenience sample of 1000 (490 men and 510 women) volunteer Indian Hindu, and Muslim students enrolled in different colleges (Lucknow, Prayagraj Jaunpur, and Varanasi) in Uttar Pradesh Province in India was recruited. Their mean age was 16.004 years (SD = 1.60). They represented different socio-economic status.

2.2 Measures:

2.2.1 Resilience scale

The original scale of Resilience is having twenty-five items which was developed by Wagnild & Young in 1993. Items are rated on 7-point Likert scale. The total scale ranges between 25 and 175 points (Wagnild and Young, 1993). The original RS indicated good psychometric properties for internal validity and content validity. A Cronbach's alfa of .91 was found and item-total correlations ranged between .37 and .75 (Wagnild, 1993). It has a unifactorial structure that includes items referring to aspects related to self-esteem, independence, mastery, resourcefulness, perseverance, adaptability, balance, flexibility, and a balanced perspective on life.

2.2.2 Emotion regulation questionnaire for children and adolescents

The ERQ-CA (Gullone & Taffe, 2012) comprises ten-items assessing the ER strategies of cognitive reappraisal (CR) and expressive suppression (ES). Items are rated on 5-point response scale. The range of scores for each scale was 6-30 for the CR and 4-20 for ES. In this study, all the ten items were adopted in Hindi. In the original scale, for the 6-item CR scale, the alpha reliability coefficient was .83, and for the 4-items ES scale, the alpha coefficient was .75.

2.2.3 Peer relationship scale

The peer Relationship scale (Anderson-Butcher et al. ,2013) is having four-items. Items are rated on 5-point scale, and alpha coefficient was .86.

2.2.4 Humor style questionnaire

Humor Style questionnaire was developed by Martin et al. (2003). Scale is having thirty-two items and rated on a 7-point scale. There are 4 dimensions in this scale, i.e., affiliative humor, self-enhancing human, aggressive humor, and self-defeating humor.

2.2.5 Body-esteem Scale

This scale was developed by Franzoi & Shields, 1984. The scale is having thirty-five items, and items are rated on five-point scale. A factor analysis indicated that three factors emerged for males and females. Factors were (1) Physical Attractiveness for males or Sexual Attractiveness for females, (2) Upper Body Strength) for males or Weight Concern (WC) for females, and (3) Physical Condition (PC) for both males and females.

3. STATISTICAL ANALYSIS

Descriptive statistics were performed using the Statistical Package for Social Sciences (SPSS Version 20 for Windows), and it was used to assess the means, standard deviation of the variables, and Cronbach's alpha . Independent t-tests were computed to assess gender differences, and the magnitude of the differences were evaluated with effect sizes (Cohen's D). For interrelations among study variables, Pearson product-moment correlations were computed.

4. PROCEDURE

The five questionnaires in the Hindi language were administered anonymously to students during small group sessions in their classrooms during scheduled college hours. The first author carried out the administration of the study scales. All participants volunteered for the study after the researcher explained its purpose briefly and assured them that anonymity would be maintained. If any student did not want to participate, he or she could leave. The reliability of the scales was computed using Indian young adults (see Table 1).

Table 1: Alpha reliability of the scales in Indian sample

SN	Scale	M	SD	Cronbach's alpha
1	**Resilience**	83.73	11.70	.82
2	**Emotion regulation**	35.69	5.90	.667
3	**Peer relationship**	15.74	3.24	.755
4	**Humor**	78.74	11.51	.767
5	**Body-esteem**	74.52	12.32	.904

Table 1 sets out the reliability with Indian college students. Alpha reliabilities ranged from .667 to .904, i.e., between acceptable to high.

5. RESULTS

Table 2: Mean score (M), standard deviation (SD), t value, and Cohen's d of the scales for men and women

Scale	Gender	N	M	SD	t	p	Cohen's D
Resilience	**Male**	490	84.65	10.74	2.457	.014*	.155
	Female	510	82.84	12.51			
Emotion regulation	**Male**	490	35.56	5.63	.698	.486	.0441
	Female	510	35.82	6.15			
Peer relationship	**Male**	490	15.99	3.08	2.444	.015*	.155
	Female	510	15.49	3.36			
Humor	**Male**	490	108.96	16.00	3.522	.000**	.222***
	Female	510	105.27	17.12			
Body-esteem	**Male**	490	77.69	12.61	8.226	.000**	.519****
	Female	510	71.48	11.24			

*p < .05, **p < .01, ***d > .2 (small effect size), ****d > .5 (medium effect size)

Table 2 presents the descriptive statistics and the t values of the study variables. Statistically significant differences between males' and females' scores were found. The inspection of this table indicates that men obtained the higher mean scores on resilience, peer relationship, humor, and body-esteem than did women, and the effect size was significant for humor and body-esteem.

Table 3: Pearson correlation coefficients between the scales

Scale	1	2	3	4	5
Resilience	1	.492**	.313**	.346**	.433**
Emotion regulation	.492**	1	.223**	.379**	.369**
Body-esteem	.313**	.223**	1	.240**	.288**
Humor	.346**	.379**	.240**	1	.329**
Peer relationship	.433**	.369**	.288**	.329**	1

p < .05 ** p < .01*.

Table 3 reveals that all the correlations between the variables were statistically significant and positive.

6. DISCUSSION

As for the first hypothesis regarding the sex-related differences, men obtained the higher mean scores on resilience, peer relationship, humor, and body-esteem than did women.

In the present study, men obtained higher mean scores on resilience. Contrary to the present result, Hampel and Peterman (2005) concluded that girls portrayed resilience factors more than boys. Gender differences in resilience factors are guided by the notion that men and women have different personality traits that influence the way they cope with adversity. For instance, men tend to communicate less during the time of adversity, and they end up getting less help and empathy as compared to women who communicate more and earn empathy and other types of support (Sun & Stewart, 2007). Women tend to utilize familial and community protective factors, while men depend more on individual protective factors. Studies have shown that women tend to be more appreciative of spiritual and social support than men who tend to rely more on personal competence (Friborg et al., 2003). Gender has been termed as an inconsistent and non-reliable predictor of resilience (Ballenger-Browning & Johnson, 2010). Campbell-Sills, Cohan, Chavira, and Stein (2006) found no significant difference in resilience among males and females. Indian culture provides greater opportunities for males to express resilience due to child rearing practice biases and greater freedom for males in society.

No sex differences were observed for emotion regulation in this study. While in past researches, men were more likely than women to report using suppression (Gross & John, 2003), but no consistent gender differences have been found for reappraisal (Gross & John, 2003; Gross, Richards, & John, 2006).

In the present study men obtained higher mean scores on body-esteem. This finding is congruence with other studies. Women had higher surveillance, body shame, and actual/ideal weight discrepancy, and lower body esteem than did men (McKinley 1998). In the present study, men obtained higher mean scores on humor. These findings are in congruence with other studies. Men reported a greater frequency of attempts at humor than women; men perceived these attempts as more effective than did the women; and the men reported using humor for negative affect more often than women (Myers, Ropog & Rodgers, 1997).In the present study, men obtained higher mean scores on peer relationship. This result is incongruent with past studies. Sex differences also exist in the *context* of peer interaction (Fagot, 1994; Leaper, 1994; Maccoby, 1998; Rubin, Bukowski, & Parker, 1998). Some evidence suggests that girls are more prosocial than are boys. Studies consistently yield medium effects indicating that girls respond in a more prosocial manner to hypothetical conflict situations than do boys in middle childhood (Chung & Asher, 1996; Hopmeyer & Asher, 1997; Rose & Asher, 1999).

The second hypothesis was fully supported, i.e., all the correlations between the study variables (resilience, emotion regulation, peer relationship, humor, and body-esteem) were statistically significant and positive. The statistically significant and high correlations between resilience and emotional regulation suggest their high criterion-related validity. Meredith et al. (2011) reviewed several individual level factors of resilience that relate to emotion regulation, such as positive coping, positive affect, positive thinking, and behavioral control. Cognitive change is grouped here as positive thinking, and situation modification would likely be classified as positive coping. Drawing on the broaden-and-build theory of positive emotions (Fredrickson, 2001) and the undoing hypothesis (Fredrickson & Levenson, 1998), research suggests that positive emotions broaden the thought–action repertoire, build personal resources, help people down regulate negative emotions, and improve coping (Tugade & Fredrickson, 2004). In these ways, it has been suggested that positive emotions aid in building the capacity for resilience (Fredrickson, Tugade, Waugh, & Larkin, 2003). To this end, regular experiences of positive affect in the wake of an adverse event seem to be important for promoting resilience. The use of strategies for up-regulation of positive affect may be particularly important to increasing resilience outcomes.

Evidence for viewing humor as a personal resiliency factor emerges from other naturalistic studies in high stress situations. High levels of coping humor are associated with more positive challenge appraisals for various life events. In turn, these positive appraisals can also generate greater enthusiasm and enjoyment for dealing with these events and are thus strongly associated with more positive affect. Identifying naturally occurring assets and strengths within the youth's ecological systems, such as peer relationships, will maximize the feasibility of leveraging those strengths to promote positive adjustment and resilience among youth who have experienced adversities.

Literature indicates that high resilience can be a protective factor, which supports a satisfactory level of one's own body's acceptance (Choate, 2005; McGrath, Julie, & Caron, 2009). The cognitive and emotional attitude towards one's own body are the cause for certain behaviors, which can have healthy or unhealthy results on the individual. The quality of the expressed attitude towards one's own body is connected with beliefs, thoughts (cognitive approach), and feelings (emotional approach) towards the body (satisfaction/dissatisfaction). It is assumed that emotional and cognitive attitudes towards one's own body have an influence on health-promoting or anti-health behaviors.

7. CONCLUSION

In conclusion, the current study findings contribute to our understanding of the psychological mechanisms of resilience, emotion regulation, peer relationship, humor, and body-esteem in young adults in a non-western context. In this vein, this study can help recognize and integrate the value of psychology and psychological approaches in the construction of processes linked to positive recognition of one's resilience and sustainable individual growth. Future experimental research should explore other personality variables in order to understand this complex relationship between resilience and mental health.

The present findings must be viewed within the limitations imposed by the data. Foremost among them is the sample. College students always have specific characteristics. Most probably, they have higher education and intelligence in proportion to the general population as well as a limited range of ages. Thus, further research is required to investigate whether the results are replicable with late adolescents from different countries. In a further study, a comparison of western countries and

eastern countries in terms of the relationship between resilience and the predictor variables could also be worth exploring. Thus, there is a need to replicate this study on the general population using a probability sample. Further research on these topics seems appropriate.

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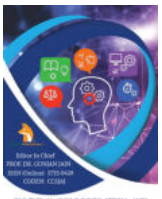

RESEARCH ARTICLE

VALIDATION OF THE FACTOR STRUCTURE OF THE HINDI VERSION OF RESILIENCE SCALE OF ADOLESCENTS IN THE INDIAN CONTEXT

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ABSTRACT

The present study was designed to adapt a Resilience Scale, which examines the resilience level in adolescents of India's Hindi speaking states. In the present study, 14 items from the Resilience Scale–R25, developed by Wagnild and Young (1993), were adapted in Hindi language in the Indian context. A total 1000 adolescent students from different Hindi speaking states of India responded to the R14 scale. To test the factorial structure of the R14, an Exploratory Factor Analysis (EFA) and a Confirmatory Factor Analysis (CFA) were performed, and the internal consistency of the scale was studied. The results supported scale multidimensionality. The obtained Cronbach's alpha revealed good internal consistency with a value of .78. Based on the psychometric properties, it is concluded that R14 is a reliable measure to assess the resilience of the adolescents of Hindi speaking states of India.

KEYWORDS

Resilience Scale, Indian Context, Exploratory Factor Analysis (EFA), Confirmatory Factor Analysis (CFA)

1. INTRODUCTION

Resilience is not just about "bouncing back." It is about "bouncing forward." Resilience does not just mean getting back to normal after facing a difficult situation. It means learning from the process in order to become stronger and better at tackling the next challenge. Resiliency is one of the usual concepts and constructs studied in optimistic psychology, and it refers to successful adaptation in the presence of threats and challenges (Hanewald, 2011). Resiliency is passive resistance against threatening conditions and damages, but only the resilient person has active participation in his surrounding environment (Jokar, 2007). This construct is particularly important in the middle of adolescence because this period is accompanied by extensive social, biological, cognitive, and neurotic changes. In this period, adolescents pass childhood entirely and enter a new stage in which they encounter many problems (Khabbaz, Behjati, and Naseri, 2011). On the other hand, as Smith and Carlson (1997) mentioned, adolescents consider stressful events more than adults. They may have unhealthy behaviors or negative attitudes (Smokowski, Reynolds, and Bezruczko, 2000). As one of the protective factors against risky factors in the future, resiliency in adolescents, especially those in the middle of this period, is a new area paid attention by researchers. According to most researchers, resiliency is a good idea with high applied value for helping people while facing difficulties and protecting them against dangers during their lives (Khabbaz, Behjati, and Naseri, 2011). Lack of resiliency in the middle of adolescence can result in impulsiveness, weak reactive control, and internal problems (Smiley, 2011).

Adolescents mark the developmental transition from childhood to adulthood, where many crucial social, economic, biological, and demographic events set the stage for adult life. In contemporary India, while adolescence is a comparatively new term, the word youth is better known and used at policy formulation and programming levels. However, even the ancient text of Dharmashastra recognized the crucial nature of adolescence and prescribed specific codes of conduct for the phase. These codes are deeply rooted in the Indian psyche and continue to influence adolescents' cultural practices robustly. To contextualize the cultural milieu in which adolescents grow in India, the relevant traditional cultural values and themes that shape and affect adolescents' environment during their growing years need to be described. The family universally is acknowledged as an institution of socialization.

Resilient adolescents have unique features, such as social competence, independence, discipline, patience, optimism, and high intelligence. They are good at problem solving. Having a target and personal control, high self esteem, and concentration on strengths are other resilient adolescents' features. Their families have mutual emotion and affection with their parents (Kiani, 2004).

The literature on the topic has shown that it is important to develop reliable and valid measures able to assess this construct (Windle, Bennett & Noyes, 2011), in different age groups and contexts (Felgueiras, Festas & Vieira, 2010).

Within the scales developed to assess the perception that an individual has of himself as able (or not) to deal with any problematic situations and/or unforeseen circumstances, to be perseverant, autonomous, and have a positive perception of himself, the Resilience Scale stands out, developed by Wagnild and Young, in 1993, in the United States. Wagnild and Young (1993) define resilience as the ability to deal with change or adversity, effectively, or even as a positive feature of personality, promoting individual adaptation (Wagnild, 2009a).

The first resilience scale consisted of 50 items. After initial factor analysis, the scale was reduced to 25 items that reflected five basic characteristics of resilience: Perseverance, Self-confidence, Serenity, Meaning, and Existential Loneliness (Wagnild & Young, 1990, 1993). The authors of the

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scale applied it on a sample consisting of 810 middle-aged adults. Results obtained from a principal component analysis (PCA with Oblique rotation), indicated the existence of two main factors, referred to as I-Personal Competence, and Factor II-Acceptance of themselves and of Life. These factors explained 44% of the total variance (Wagnild & Young, 1993). The factor I was composed of 17 items that reflected self-confidence, independence, mastery, resourcefulness, and perseverance. With 8 items, Factor II represented the ability to adapt, balance, flexibility, and a balanced perspective on life. Wagnild (2009b), resilience scale had already been applied to various population groups of different ages: adolescents, adults and the elderly, including risk populations and mothers with children in pre-school age with translations and adaptations for more than a dozen countries. These studies have found Cronbach's alpha between .72 and .94, which attested the good internal consistency of the RS25, demonstrating that this was a good scale to apply in different age groups and ethnicities (Wagnild, 2009b). However, Wagnild (2009a), in the user's guide of the scale, highlighted the existence of a unifatorial scale structure, and recommended that its quote should take into account a total score.

Felgueiras et al. (2010), in a sample of adolescents, and Oliveira & Machado (2011), on a sample of university students, found a multidimensional structure of five factors, which presented good psychometric properties. Later, and using exploratory factor analysis, Pinheiro and Matos (2013a, 2013b) redefined some items and studied the RS's construct validity for a sample of Portuguese adolescents. This investigation gave rise to an extended version, of 23 items and a short version, of 13 items, with a unifatorial structure. Concerning reliability, excellent internal consistency was found for RS23 (Alpha equal to .95) and for RS13 (Alpha equal to .93) (Pinheiro & Matos, 2013a, Pinheiro & Matos, 2013a, 2013), in line with the values already found in other studies (Abiola & Udofia, 2011; Felgueiras et al., 2010; Pesce et al., 2005; Wagnild & Young, 1993).

2. Objective

The present study aims to explore the factorial structure of R25 through an Exploratory Factor Analysis (EFA) and a Confirmatory Factor Analysis (CFA).

3. Method

3.1 Participants

Data was collected on a sample of 1000 adolescent students from different colleges of Hindi speaking states of India.

3.2 Instruments

The original scale of the Resilience has 25 items developed by Wagnild & Young in 1993. Items are rated on 7-point Likert scale. The total scale ranges between 25 and 175 points (Wagnild and Young, 1993). The original RS indicated good psychometric properties for internal validity and content validity. A Cronbach's alfa of .91 was found, and item-total correlations ranged between .37 and .75 (Wagnild, 1993). It is composed of a unifatorial structure that includes self-esteem, independence, mastery, resourcefulness, perseverance, adaptability, balance, flexibility, and a balanced perspective on life (Wagnild, 2009a, 2009b; Wagnild & Young, 1993). As for the local requirement, 14 items were chosen from the original scale and were adapted in Hindi. Items are rated on a 5-point response scale. The total score range between 14 and 70. The adopted RS indicated good psychometric properties concerning internal validity and content validity. A Cronbach's alfa of .78 was found, and item-total correlations ranged between .39 and .46 (Wagnild, 1993). It is composed of a five factorial structure that includes items measuring preservence, self-reliant, interest in life, self-confidence & accomplishment, and self-determination.

3.3 Methodological Procedure

Data collection was conducted from different colleges of Hindi speaking states of India. The questionnaire was delivered to the students. Before starting the infill, the following description could be read: “Please carefully read each of the following statements and answer them about you, the way you think, feel and act." Individuals should respond according to the degree to which they considered the items to better describe them.

3.4 Statistical Procedure

A sample of 1000 adolescents was used to carry out the Exploratory Factor Analysis (EFA). The minimum and maximum values and means and standard deviations were yielded for the total sample for descriptive analysis.

In the analysis of dimensionality of the 14 items of the Resilience Scale (RS14), an exploratory factor analysis (EFA) was conducted, using the computer program SPSS (Statistical Package for the Social Sciences – version 16.0 for Windows)

The RS14 was studied using a principal components analysis, followed by a varimax rotation. The selection of the number of factors to be rotated was based on the Kaiser criteria of five factors. Items were kept based on factorial weights, commonalities, item-total correlations, and alfa values if the item was deleted. To ensure the data's adequacy, the Kaiser-Meyer-Olkin (KMO) test was used, which ranges between 0 and 1, being .60 the minimum value to consider the analysis good (Tabachnick & Vivek, 2011). Pestana & Gageiro (2005) reported that values below.50 are unacceptable, between .50 and .60 are considered bad, from .60 to .70 acceptable, between .70 and .80 medium, from .80 to .90 good and values above .90 are considered very good. Bartlett's Test of Sphericity was also used to test the data's adequacy to perform factor analysis.The internal consistency (reliability) of the scale was calculated using Cronbach's alpha (value .78 is considered reliable, according to Pestana and Gageiro, 2003). Concerning item-total correlations, values below 0.30 suggest that it may be more suitable to eliminate the item (Osborne & Castello, 2005).

To perform the confirmatory factor analysis (CFA), the computer software SPSS AMOS, version 18 for Windows, was used. Firstly, the assumptions underlying this analysis were verified, considering the absolute values of skewness (Sk) and kurtosis (Ku). Sk values > |3| and Ku values > |10| indicate violations of principles of normality (Kline, 2005). Mahalanobis distance (MD^2) was analyzed to identify possible outliers. The quality of adjustment of the model was evaluated based on a number of measures: the Chi-square ($\chi 2/df$), Goodness-of-Fit Index (GFI), Normed Fit Index (NFI), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), Parsimony comparative fit index (PCFI), Parsimony Goodness-of-Fit Index (PGFI) and Root Mean Square of Approximation (RMSEA). To evaluate the model's adjustment, the following values were considered: $\chi 2/df$ inferior to 2 was considered good, TLI and CFI were considered good when superior to .90 (Kline, 2005; Maroco, 2010). GFI varies between 0 and 1, considering that the closer to 1, the better the adjustment of the model (Maroco, 2010). PNFI was considered good if superior to .60 and very good if higher than .80. For the PGFI and PCFI, the indexes are considered good when between .60 and .80 and very good if over .80 (Maroco, 2010). When it comes to RMSEA, values between .05 and .10 were considered good, and values lower than .05 were considered very good (Maroco, 2010; Meyers, Gamst, & Guarino,2013). After the CFA was conducted, the adjustment indices, the factorial weights ($\lambda \geq .40$), and individual reliabilities ($R^2 \geq 0.25$) were analyzed (Maroco, 2010).

4. Results

4.1 Exploratory factor analysis (EFA)

The exploratory factor analysis (EFA) aimed to test the factorial structure proposed by the original authors, Wagnild & Young (1993), and consequently validate it for adolescents of the Hindi speaking states of India. For this purpose, we used a sample of 1000 adolescents.

In the first principal component analysis, the viability of EFA was guaranteed using the KMO test (.868), considered acceptable, and Bartlett's Sphericity Test [$\chi 2(1000)=2.088$; $p<.001$], which proved to be significant. According to Kline (2005), all individual items presented values do not overly differ from the values considered appropriate, allowing to affirm that there was no violation of normality principles.

The set of 14 items from the RS was subjected to principal component factor analysis, using a varimax rotation and structure of five factors that explained 55.904% of the total variance was found.

The below table shows that the items on preservence dimension are five; self-reliance are three; interest in life are two, self-confidence & accomplishment are two and self-determination are two. If you have strong theoretical and practical reasons, a factor can contain two items (Gosling, Rentfrow & Swann Jr. 2003).

Table 1: Factorial Weights and Commonalities (h^2)				
Item No.	**Items**	**Dimensions**	**Factorial Weight λ**	**Commonalities h^2**
2.	I usually manage one way or another (प्राय: मैं किसी न किसी प्रकार से कार्य संपन्न कर लेता/लेती हूँ।)	Self-reliance	.528	.278
3.	I am able to depend myself more than anyone else (अन्य की तुलना में, मैं स्वयं पर अधिक निर्भर हूँ।)	Self-reliance	.827	.683
4.	Keeping interested in things is important to me (चीजों में रूचि बनाये रखना मेरे लिए महत्वपूर्ण है।)	Interest in life	.738	.544
5.	I can be on my own if I have to (यदि मुझे कार्य करना ही हो तो मैं स्वत: कर सकता/सकती हूँ।)	Self-reliance	.555	.308
6.	I feel proud that I have accomplished things in my life (मुझे इस बात पर गर्व का अनुभव होता है कि मैने जीवन में कई कार्यो को सम्पन्न किया है।)	Self-confidence and accomplishment	.551	.303
7.	I usually take things in stride (मैं प्राय: चीजों को शीघ्रता से करता/करती हूँ।)	Self-confidence and accomplishment	.814	.662
10.	I am determined (मैं दृढ़प्रतिज्ञ हूँ।)	Self determination	.823	.677
14.	I keep interested in things (मैं चीजों में रूचि बनाये रखता/रखती हूँ।)	Interest in life	.777	.603
16.	My belief in myself gets me through hard times (मेरा आत्मविश्वास मुझे बुरे वक्त को पार करा देता है।)	Perseverance	.457	.208
17.	In an emergency, I'm someone people generally can rely on (किसी आपात स्थिति में, मैं एक ऐसा/ऐसी व्यक्ति हूँ, जिसपर लोग सामान्यत: भरोसा कर सकते हैं।)	Self determination	.474	.224
18.	I can usually look at a situation in a number of ways (किसी परिस्थिति को मैं अलग-अलग नजरिये से देख सकता/सकती हूँ।)	Perseverance	.538	.289
19.	My life has meaning (मेरा जीवन उद्देश्यपूर्ण है।)	Perseverance	.672	.451
20.	When I'm in a difficult situation, I can usually find my way out of it (जब मैं किसी कठिन परिस्थिति में होता/होती हूँ तो मैं सामान्यत: बाहर निकलने का रास्ता तलाश लेता/लेती हूँ।)	Perseverance	.674	.454
21.	I have enough energy to do what I have to do (मुझे जो करना होता है उसके लिए मेरे पास पर्याप्त उर्जा होती है।)	Perseverance	.670	.446

The properties of the items and internal consistency were studied through the analysis of the means and standard deviation of the item, the item-total correlations, and Cronbach's alpha value if the item was to be deleted (Table-2).

Table 2: Properties of the items and internal consistency of the final scale					
Item No.	**Items**	**M**	**SD**	**r**	**α**
2.	I usually manage one way or another (प्राय: मैं किसी न किसी प्रकार से कार्य संपन्न कर लेता/लेती हूँ।)	3.8630	1.02337	.392	.773
3.	I am able to depend myself more than anyone else (अन्य की तुलना में, मैं स्वयं पर अधिक निर्भर हूँ।)	3.8650	1.16453	.335	.778
4.	Keeping interested in things is important to me (चीजों में रूचि बनाये रखना मेरे लिए महत्वपूर्ण है।)	3.8820	1.11684	.376	.774
5.	I can be on my own if I have to (यदि मुझे कार्य करना ही हो तो मैं स्वत: कर सकता/सकती हूँ।)	4.0330	1.07288	.451	.768
6.	I feel proud that I have accomplished things in my life (मुझे इस बात पर गर्व का अनुभव होता है कि मैने जीवन में कई कार्यो को सम्पन्न किया है।)	3.7710	1.18826	.395	.773
7.	I usually take things in stride (मैं प्राय: चीजों को शीघ्रता से करता/करती हूँ।)	3.5590	1.18909	.393	.773
10.	I am determined (मैं दृढ़प्रतिज्ञ हूँ।)	3.6200	1.20792	.403	.772
14.	I keep interested in things (मैं चीजों में रूचि बनाये रखता/रखती हूँ।)	3.9820	1.05109	.420	.770
16.	My belief in myself gets me through hard times (मेरा आत्मविश्वास मुझे बुरे वक्त को पार करा देता है।)	3.9530	1.04397	.421	.770
17.	In an emergency, I'm someone people generally can rely on (किसी आपात स्थिति में, मैं एक ऐसा/ऐसी व्यक्ति हूँ, जिसपर लोग सामान्यत: भरोसा कर सकते हैं।)	3.8440	1.06527	.401	.772
18.	I can usually look at a situation in a number of ways (किसी परिस्थिति को मैं अलग-अलग नजरिये से देख सकता/सकती हूँ।)	3.7350	1.09177	.363	.775
19.	My life has meaning (मेरा जीवन उद्देश्यपूर्ण है।)	4.0050	1.11992	.419	.770
20.	When I'm in a difficult situation, I can usually find my way out of it (जब मैं किसी कठिन परिस्थिति में होता/होती हूँ तो मैं सामान्यत: बाहर निकलने का रास्ता तलाश लेता/लेती हूँ।)	3.9110	1.00702	.377	.774
21.	I have enough energy to do what I have to do (मुझे जो करना होता है उसके लिए मेरे पास पर्याप्त उर्जा होती है।)	3.9510	1.08710	.463	.767

4.2 Confirmatory Factor Analysis (CFA)

We performed CFA based on the variance – covariance matrix using the AMOS 18 statistical package for testing the five-factor model. Parameters were estimated for the CFA model based on the maximum likelihood procedure (sometimes called path analysis) involving fitting the variance and covariance among observed scores. AMOS, therefore, created a covariance matrix, including the variances and covariances among observed scores.

It was estimated to identify the five factor model in order to estimate the model parameters. Factor loadings and the variances and covariances among the errors were used to identify the five-factor model. In conducting CFA, no warning messages were received from AMOS regarding parameter estimates. Based on this information, the five-factor model passed the "rules" for identification.

Following identification of the five-factor model, we examined the assessment of universal fit of the quality of the model in AMOS in order to support or reject its appropriateness for the population examined. The next step was to illustrate the observed (items) and unobserved (factors) in the hypothesized model (Figure 1). The observed variables are represented as rectangles, ellipses represent the unobserved variables, and the circles represent measurement error. The measurement model consists of five interrelated constructs: preservence, self-reliance, interest in life, self-confidence & accomplishment, and self-determination. The arrow between the unobserved variable and the observed variable represents a regression path, and its number represents the standardized regression weight. The double-headed arrows represent the correlation between two unobserved variables (factor covariance) of the model.

Table 3: Goodness-of-fit indices for the five-factor model of the Resilience Scale (N=1000)

Model	χ2	df	p	χ2/df	GFI	CFI	RMSEA
Total sample (N=1000)	130.348	67	.000	1.945	.982	.968	.031

The R14 presented a χ2/df=1.945 (χ2/df inferior to 2 was considered good) & p< .000, which are good. Quality adjustment indices were very good, GFI .982 (varies between 0 and 1, considering that the closer to 1, the better the adjustment of the model); CFI .968 (good when superior to .90) and RMSEA .031 (values between .05 and .10 were good and values lower than .05 were considered very good) (Maroco, 2010).

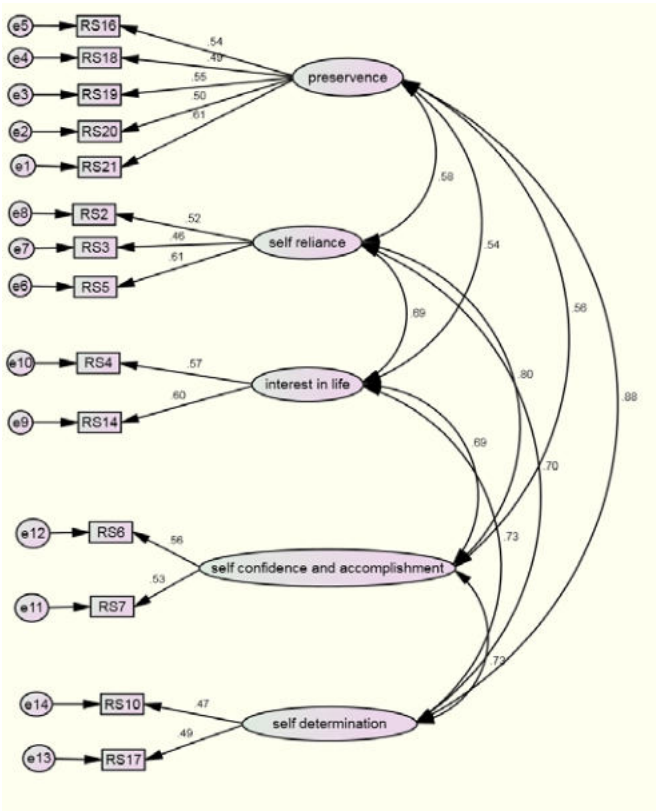

Figure 1: Hypothesized 14-item model of factorial structure of the Resilience Scale

5. Discussion

The present study's main objective was to adapt and explore the psychometric properties of the adapted 14 items of the Resilience scale-R25 developed by Wagnild & Young (1993) on Hindi speaking state's adolescents of India.

In the present investigation, a five factor structure was found, consisting of 14 items, which differs from the original scale proposal by Wagnild and Young (1993), but is in line with what was proposed by Wagnild (2009a). This scale is composed of five factors that explain 55.904% of the variance. The factorial structure obtained showed appropriate values concerning item-total correlations and their respective Cronbach's alfa values. Item-total correlations found were greater than .30, and Cronbach's alfa was considered reliable, i.e., 0.78 (Pestana and Gageiro, 2003).

Based on the data, we generated a five-factor model using Varimax rotation. To determine the psychometric properties of R14, the specification of the five-factor model; assessment of fit between the model and observed variables (items) were presented through the CFA approach. The measurement model consists of five interrelated constructs: preservence, self-reliance, interest in life, self-confidence & accomplishment, and self-determination. The R14 presented a good χ2/df score (1.945) and good quality adjustment indices, i.e., GFI .982; CFI .968, and RMSEA .031 (Maroco, 2010). Consequently, we could conclude that R14 items provide a valid and reliable scale to assess adolescents' ability to deal with change or adversity effectively.

6. Limitations of The Study

It is essential to consider some limitations of this study. Since this scale is meant for adolescents only, it is advisable to reassess this scale's psychometric properties for other populations in the Indian context. It was administered in Hindi speaking states of India. Thus, it is also advisable that reassess the psychometric properties of this scale in other states of India. R14 items provide a valid and reliable scale to effectively assess adolescents' ability to deal with change or adversity.

7. Conclusions

This study's results supported the usefulness of the R14 as a brief, reliable, and psychometrically sound scale for measuring adolescents' resilience. We recommended that the scale be revalidated on different populations and other states except Hindi speaking states to measure resilience.

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